Name:_____

UNIT 2 TEST REVIEW

Part I: Vocabulary

Directions: Define the following terms.

1) Force:

2) Balanced Force:

3) Unbalanced Force:

4) Acceleration:

5) Velocity:

6) Resultant:

7) Speed:

8) Friction:

9) Gravity:

10) Vector:

Part II: Questions

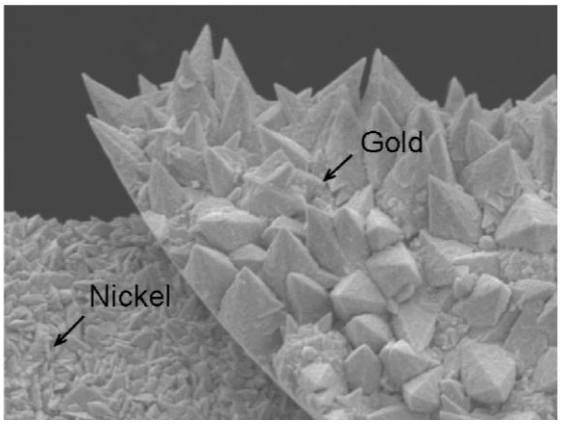
Directions: Answer the following questions

1. Forces are measured in units called _____.

2. Forces can affect the movement of an object in 5 ways:
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____

3. Greek letter "μ" (pronounced mu) is the symbol for:
    a. Friction
    b. Gravity
    c. Coefficient of Friction
    d. Kinetic energy

4. The following is an image of which structure:



    a. Sandpaper
    b. Asperities
    c. Diamonds
    d. Stalagmites

5. The amount of friction depends on:
    a. Force and Gravity
    b. Gravity and Weight
    c. Roughness and Asperities
    d. Roughness and Force

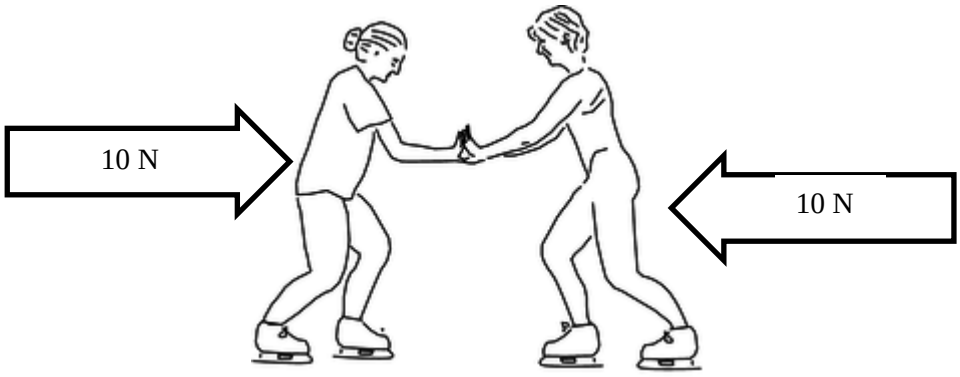
6. Give an example of how you USE friction in your everyday life.

7. Give an example of how you REDUCE friction in your everyday life.

Part III: Calculations

Directions: Complete the following calculations

8. Calculate the Net Force for the situation below.



Net Force =

Will there be motion? Yes or No

Which direction will the motion be in? (Circle one) ← or → or No Motion

9. A cyclist travels 60.0km in 3 hours. What is the cyclists speed?

   a) What is the formula used to calculate speed?

   b) Show work:

   c) Cyclist's Speed=

10. What is the velocity of a car that travelled 75 km North in 1.5 hours?

    a) What is the formula used to calculate velocity?

    b) Show work:

    c) Car's velocity=

11. A lizard begins running at a velocity of 2 m/s and speed up to 10 m/s in 4 seconds. What is the lizard's acceleration?

    a) What is the formula used to calculate acceleration?

    b) Show work:

    c) Lizard's acceleration=

Part IV: Graphing

1. On a distance time graph where are time and displacement plotted?

2. What does it mean when an object is travelling at a constant speed? How is this information represented on a distance time graph?

3.

Segment 0-A The bus is _____. Its speed changes from 0 to 10 m/s in 5 seconds.

Segment A-B The bus is moving at a _____of 10 m/s for 5 seconds.

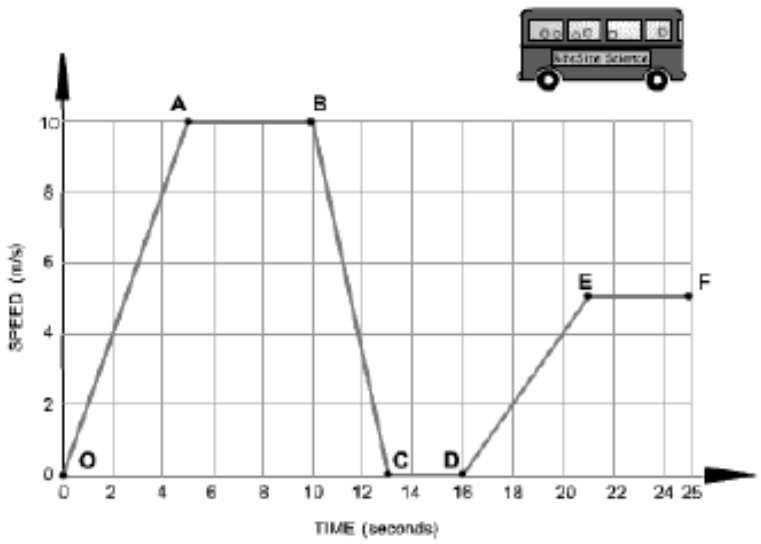
Segment B-C The bus is _____. It is slowing down from 10 m/s to rest in 3 seconds.

Segment C-D The bus is _____. It has stopped.

Segment D-E The bus is _____.

4. It is gradually increasing in speed.

The graph below shows how the speed of a bus changes during part of a journey



Choose the correct words from the following list to describe the motion during each segment of the journey to fill in the blanks.

- accelerating
- decelerating
- constant speed
- at rest

11) Draw a force vector that represents 4 N to the right.

12) 2 N to the left, 5N to the right

Draw the forces and resultant net force as a vector.

Part V: Lab Questions

13) What are components to a strong procedure?

14) How could you have improved your parachute?

15) In the Mu of Shoe lab, how does the force of friction compare to the weight of the shoe?

16) Does it take more force to start an object moving or to keep it moving?